

Appendix C

Correlated PM₁₀ Concentrations and Winds

The following graphs illustrate the direct correlation between wind speeds¹ and PM₁₀ concentrations at select monitoring sites within the Salton Sea Air Basin on September 19, 2016. Note a variety of instruments measure wind speed at different times during any given hour. Therefore, the following graphs reflect the hour of the wind measurement.

IMPERIAL COUNTY SITES (Figures C-1 to C-5)

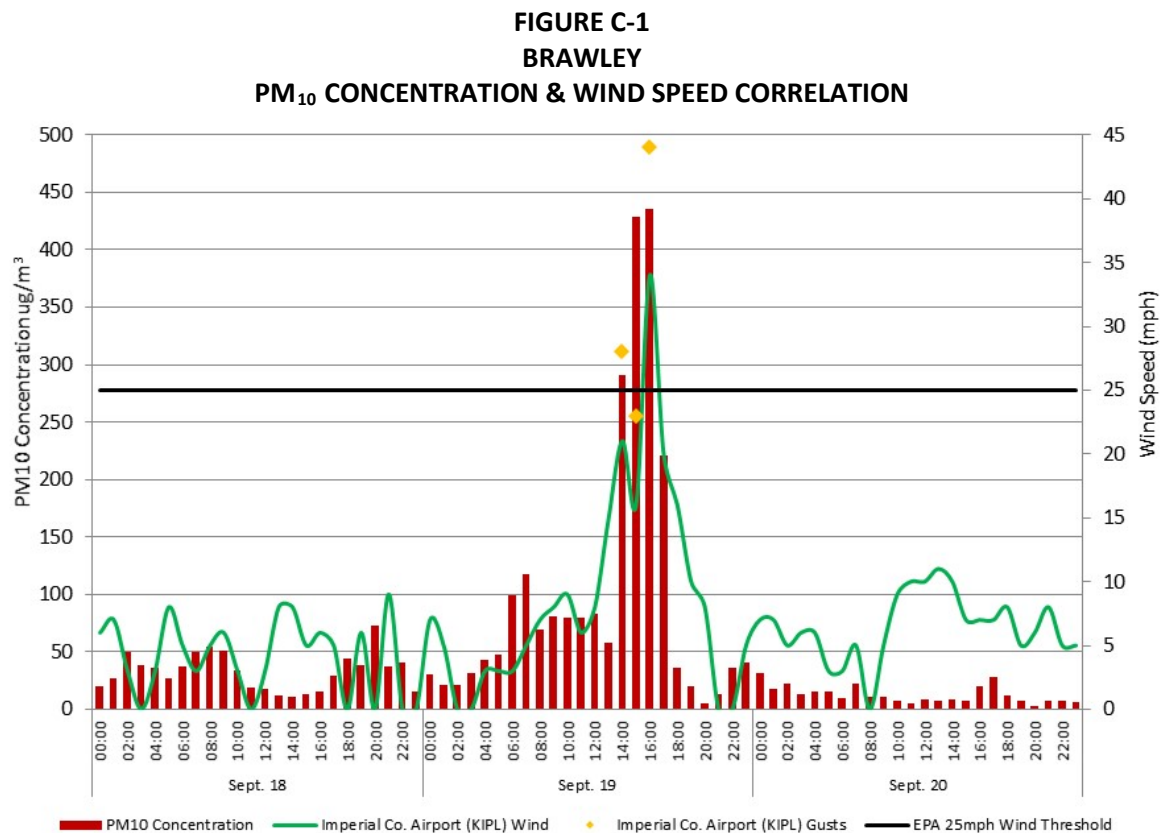


Fig. C-1: Fluctuations in hourly concentrations over 72 hours show a positive correlation with wind speeds, and particularly gusts, at Imperial County Airport (KIPL). Brawley station does not measure wind. Air quality data from the EPA’s AQS data bank. Wind data from the NCEI’s QCLCD system.

¹ National Weather Service; NOAA’s Glossary – Wind Speed: The rate at which air is moving horizontally past a given point. It may be a 2-minute average speed (reported as wind speed) or an instantaneous speed (reported as a peak wind speed, wind gust, or squall); <https://w1.weather.gov/glossary/index.php?letter=w>

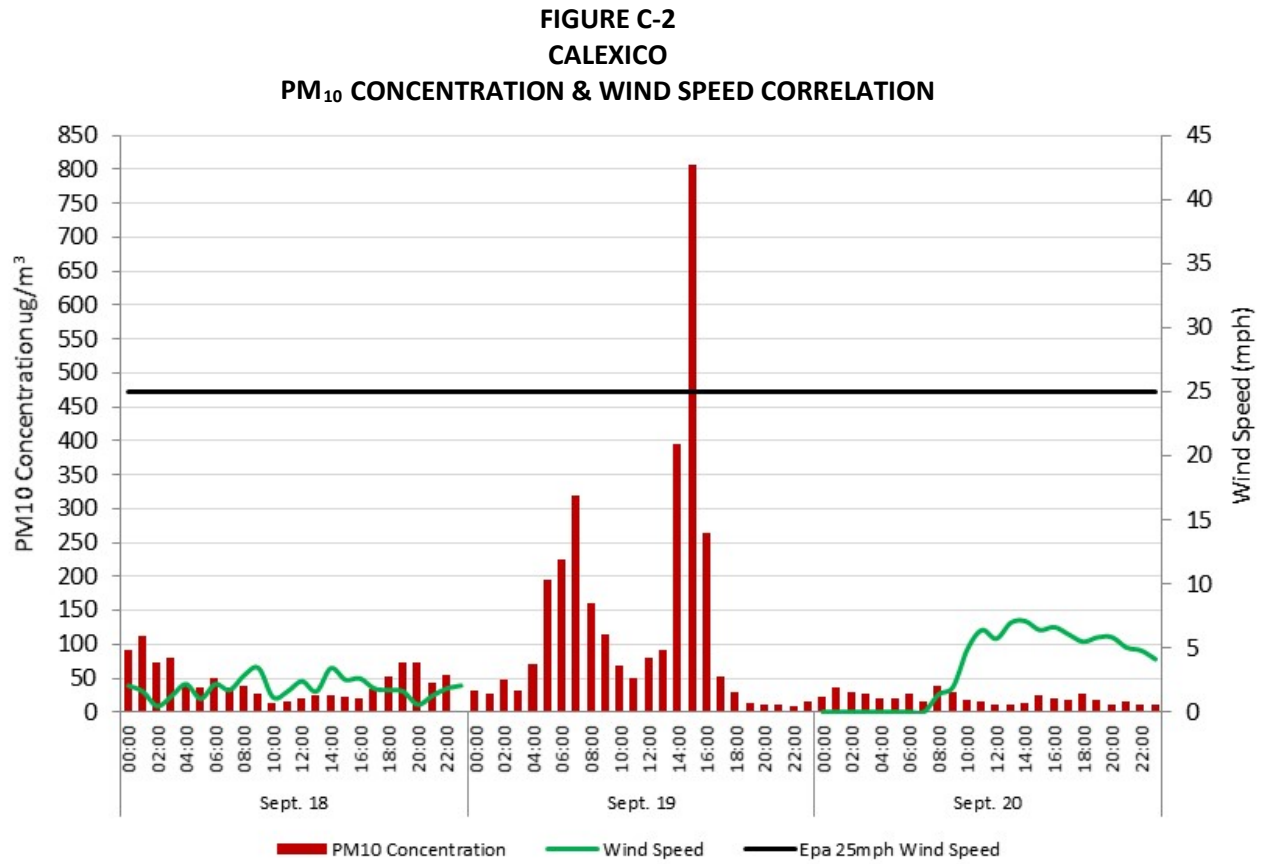


Fig. C-2: Calexico did not record wind data (coded "BK") during September 19. Air quality and wind data from the EPA's AQS data bank.

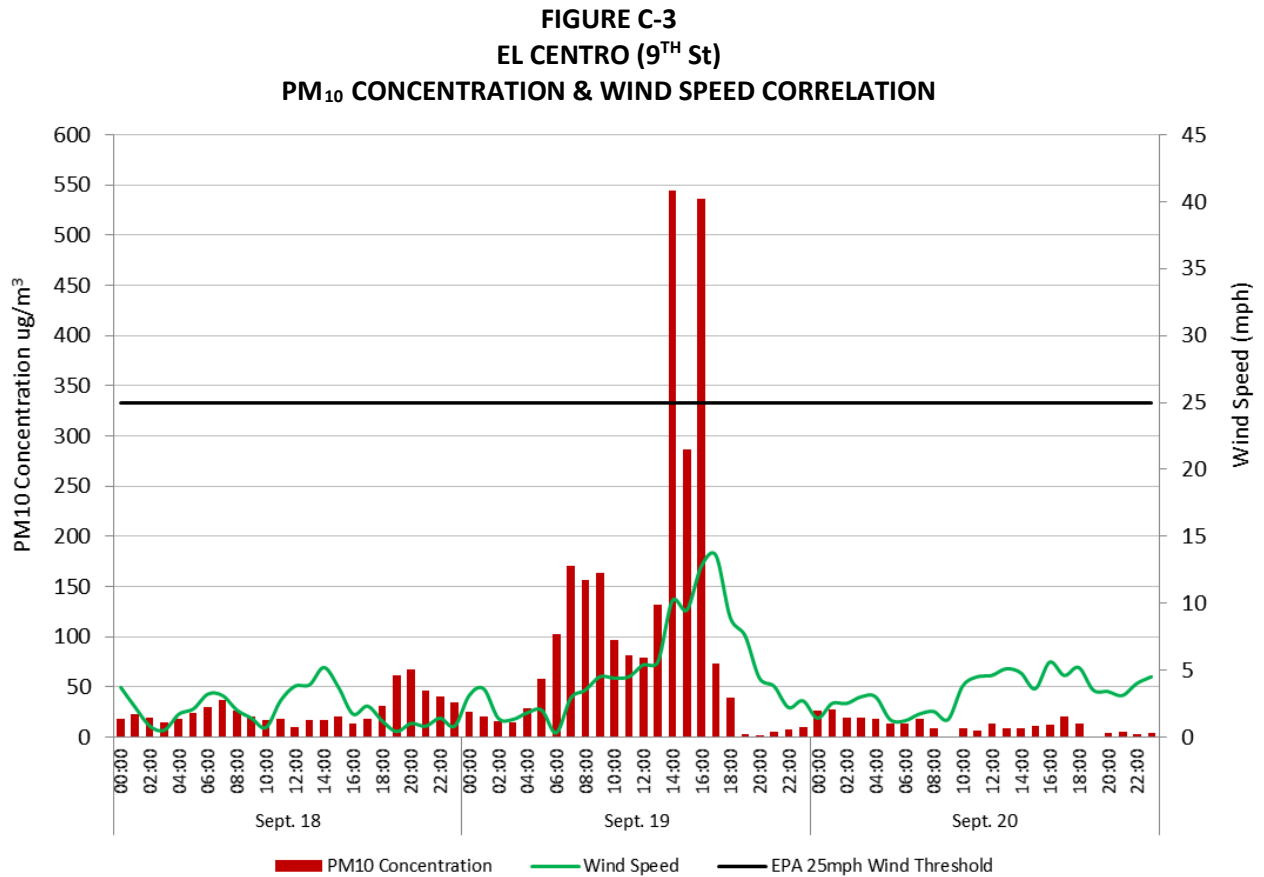


Fig. C-3: Winds at El Centro did not reach the 25 mph threshold. However, higher winds upstream transported dust downstream, where lower wind speeds at the station allowed dust to be deposited. Air quality and wind data from the EPA's AQS data bank.

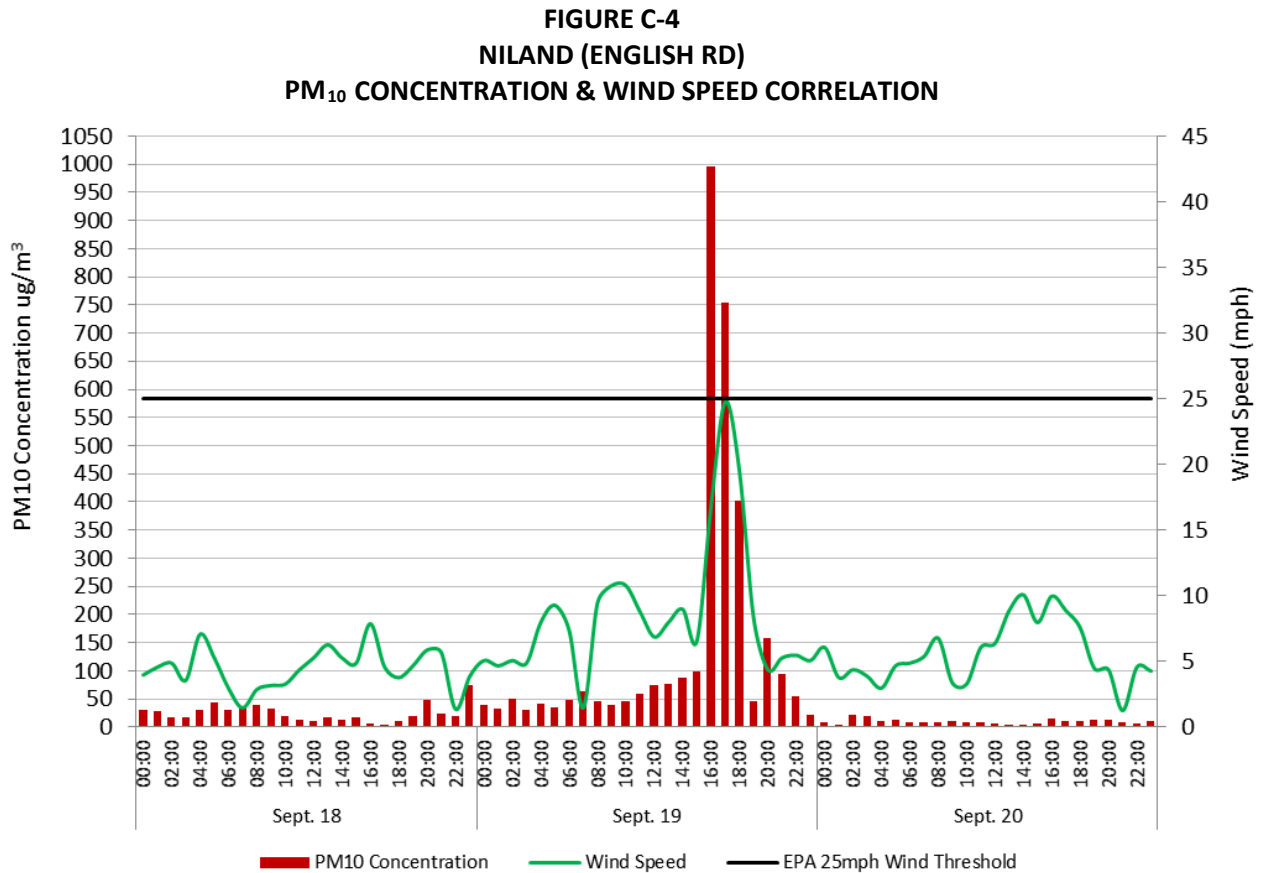


Fig. C-4: Winds at Niland (English Rd) reached the 25 mph threshold. However, the monitor was farther downstream than Westmorland and the bulk of the dust precipitated out of the air before reaching the station. Still, the monitor narrowly avoided an exceedance. Air quality and wind data from the EPA's AQS data bank.

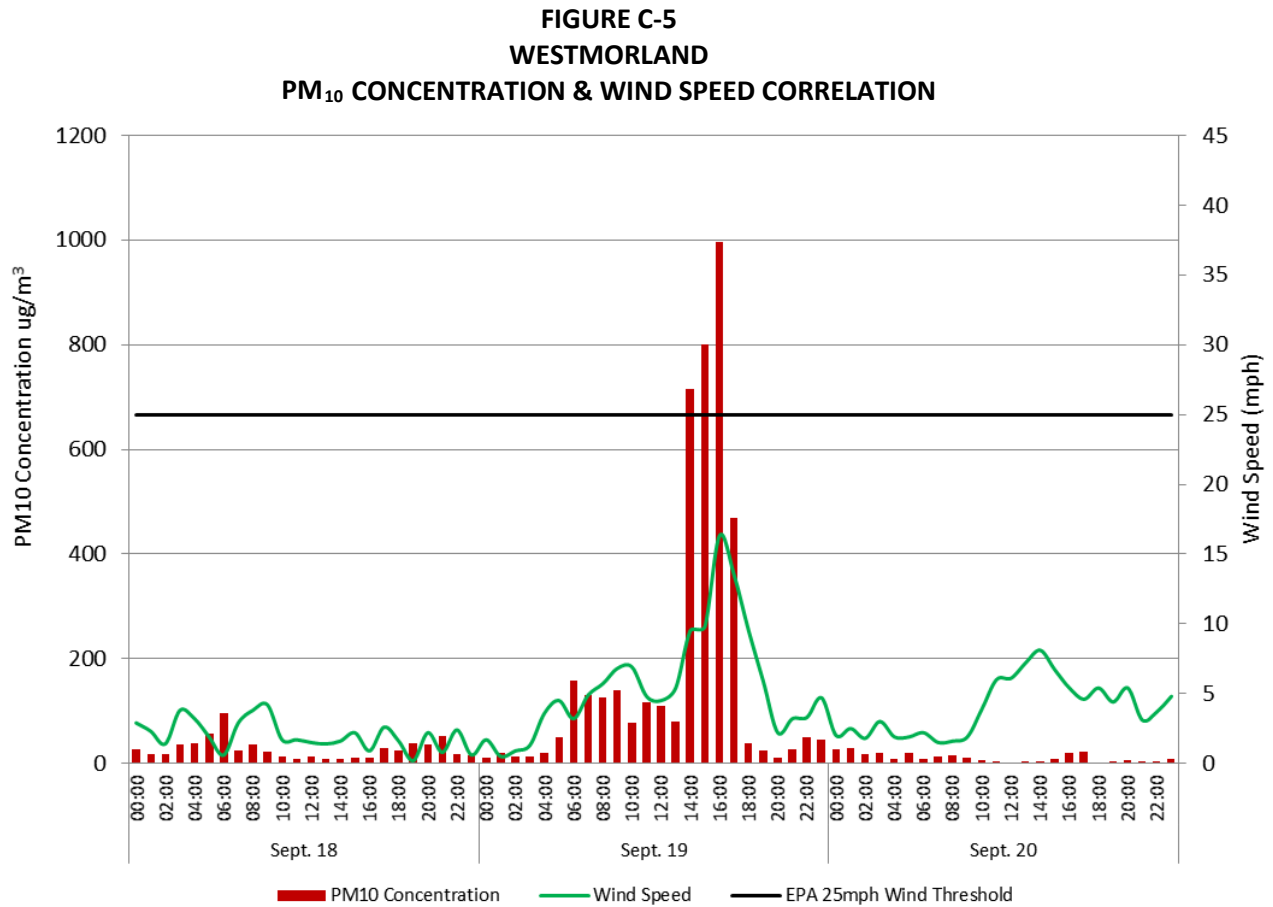


Fig. C-5: Although winds did not surpass 25 mph at Westmorland station, higher winds upstream transported dust downstream, where lower wind speeds at the station allowed dust to be deposited. Air quality and wind data from the EPA's AQS data bank.

EASTERN RIVERSIDE COUNTY SITES

FIGURE C-6
TORRES-MARTINEZ DESERT CAHUILLA INDIANS RESERVATION
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

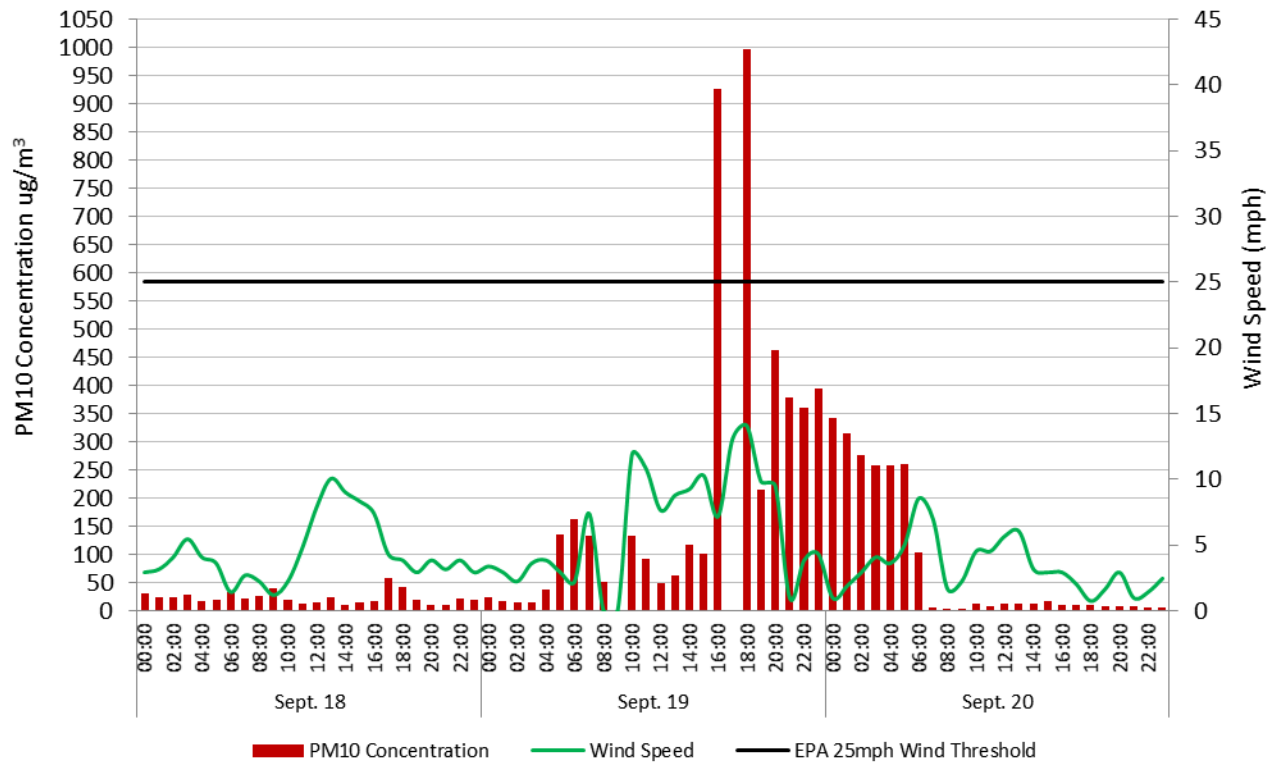
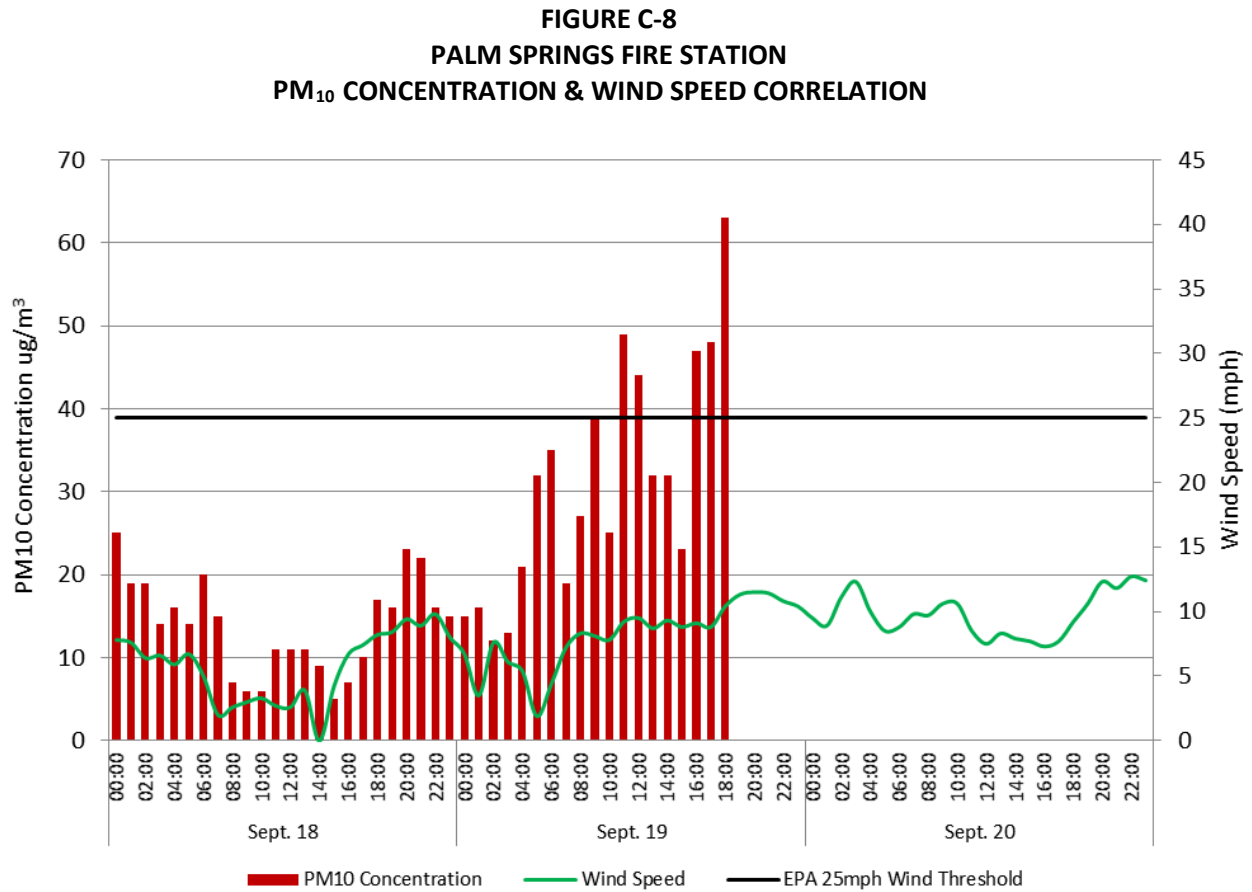


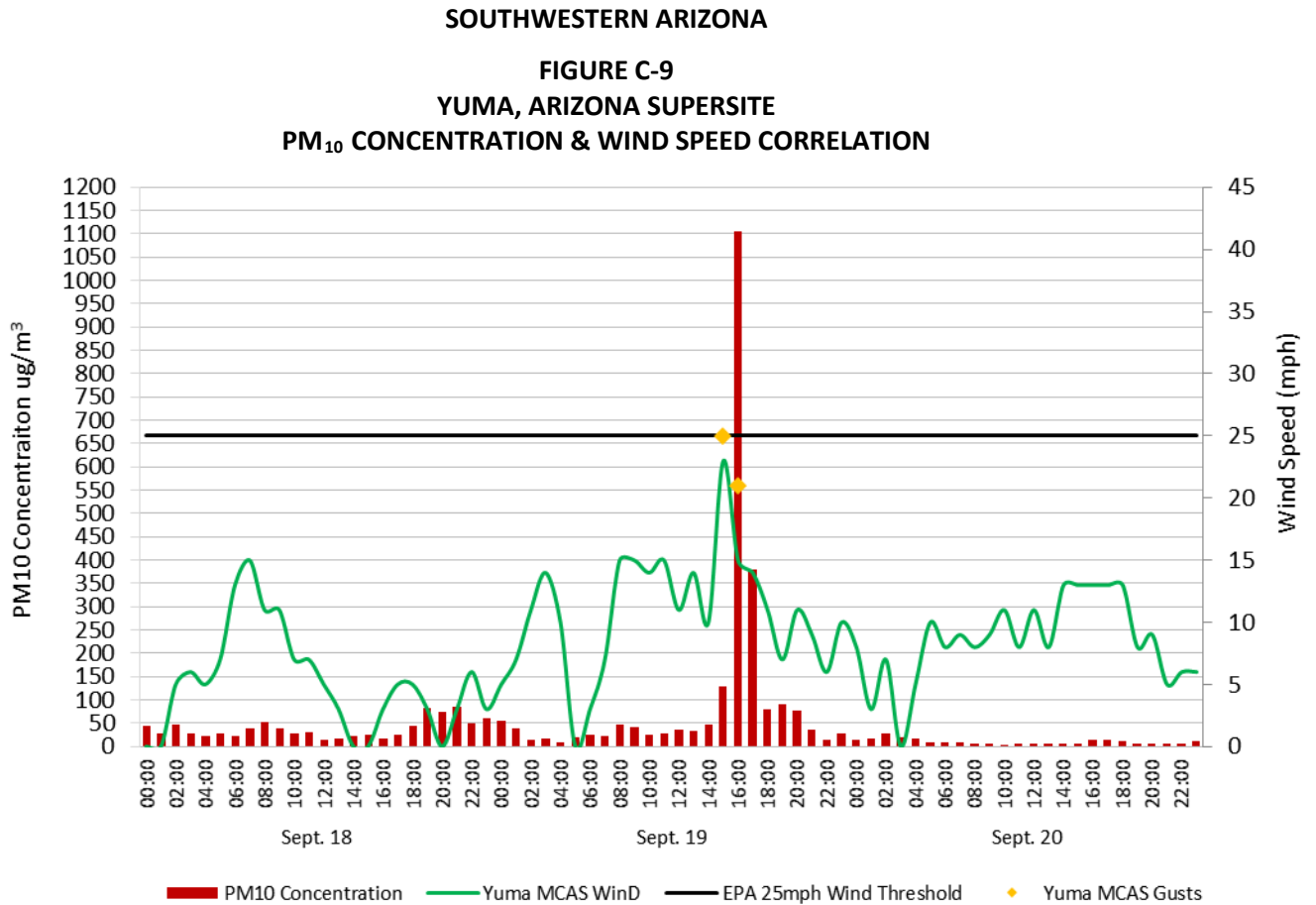
Fig. C-6: Concentrations rose in response to higher winds on September 19, 2016. Air quality and wind data from the EPA's AQS data bank.

FIGURE C-7
INDIO (JACKSON ST)
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

Fig. C-7: Indio (Jackson St) was coded "AN" during this period.



Figs C-8: Concentrations rose in response to higher winds on September 19, 2016. Air quality and wind data from the EPA's AQS data bank.



Figs C-9: Yuma Supersite in Yuma, Arizona, located in the southwestern portion of Arizona, saw increased PM₁₀ concentrations in response to higher winds. Air quality data from the EPA's AQS data bank. Wind data from the NCEI's QCLCD system.